

Work Order ID **156350**

156350

Page 1

Friday, January 27, 2017 1:31:11 PM

Item ID: D4292-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fitting

Start Date: 1/17/2017 Start Qty: 2.00 ***2***

Cust Item ID:

Required Date: 1/27/2017 Req'd Qty: 2.00 ***2***

Customer:

Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: **FEB 01 2017** Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4292	C

100

0.00

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank to 6.250"

0.03

17-02-08

6 φ

****GRAIN DIRECTION MUST BE ALONG 4.00"*****

110

0.01

110

HAAS 5AXIS

HAAS CNC vertical machine #5

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB002

DWG REV: **C**

FOLIO REV: **AA**

0.33

6 φ

DAS 14 9-89

17/02/10

2- Deburr and break all sharp edges

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																		
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Work Order ID 156350

Friday, January 27, 2017 1:31:11 PM

156350

Page 2

Item ID: D4292-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Fitting

Start Date: 1/17/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/27/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

6

0

DAS
14
9-89

17/02/10

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.01

Quality Control

6

0

DAS
49
9-89

17/02/13

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.02

Hand Finishing

(x6)

0

2017/02/15

BEB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :					
Misidentified ☐	Past Due ☐						

Work Order ID 156350***156350***

Page 3

Friday, January 27, 2017 1:31:11 PM

Item ID: D4292-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fitting

Start Date: 1/17/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/27/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Powder Coating

Memo

MASK THREADED HOLE

0.03

START: 8:20
O.U.T: 3:25
FINISH: 8:50

6 4 17-02-16. 338

160

QC3- Inspect Part Finish

0.00

160

QC

Quality Control

Memo

0.00

6 DAS
38
9-89
FEB 16 2017

170

0.00

170

Small Fab

Small Fab

Memo

INSTAL HELICOIL

0.02

6x 17/2/16 DAS
36
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Work Order ID 156350

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156350

Page 4

Item ID: D4292-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fitting
Start Date: 1/17/2017 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 1/27/2017 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.01				<u>6</u>			DAS 38 9-89 FEB 17 2017
190 *190* Packaging Packaging	Identify as per dwg & Stock Location: <u>51533</u> Memo	0.00 0.00				<u>6</u>			DAS 6 9-89 FEB 17 2017
200 *200* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.03							17/2/22 <u>umf</u> 17-2-21

DQA: _____ Date: _____



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Work Order update only ☐

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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Friday, January 27, 2017 1:31:15 PM

Page 1
T

Work Order ID: 156350

156350

Parent Item: D4292-1

D4292-1

Parent Item Name: Fitting

Start Date: 1/17/2017

Required Date: 1/27/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-11-14 JLM VERIFIED BY:DD IPP REV
B: AS PER REV B 11-02-15 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T73B4.000x4.00 0		Purchased	No			100	f	5.1065	0.52	1.094737			

M7075T73B4 000x4 000

7075-T73 Bar 4.0 x 4.0 grain direction along 4" wide

** D= 17-02-08

Location	Loc Qty	Loc Code
MAT006	5.1065	
→ M135792	4	
M135933	1.1065	

3.160 ft

MS21209F1-10

Purchased

No

Each

27.0000

2

MS21209F1-10

HELI COIL

**

17/02/16 DAS 36 9-89

Location	Loc Qty	Loc Code
ST297	27	
m132344	27	

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

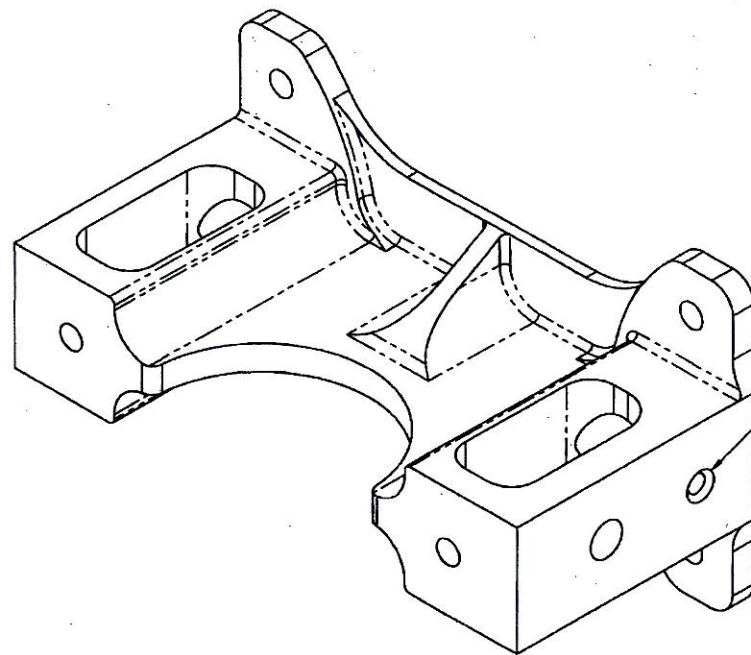
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐									

DART AEROSPACE LTD	Work Order:	156350
Description: Fitting	Part Number:	D4292-1
Inspection Dwg: D4292 Rev: C		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.063	+/-0.010	R.060	✓		R-G	
0.250	+0.030/-0.010	.250	✓		Vern M-06	
0.125	+0.030/-0.010	.123	✓		"	
2.95	+/-0.030	2.945	✓		"	
0.275	+/-0.010	.275	✓		"	
0.800	+/-0.010	.799	✓		"	
0.825	+/-0.010	.824	✓		"	
0.375	+/-0.010	.375	✓		"	
0.31	+/-0.030	.314	✓		"	
0.88	+/-0.030	.875	✓		"	
0.663	+/-0.010	.660	✓		"	
Ø0.381	+0.000/-0.001	Ø.380	✓		G-pin	
1.125	+/-0.010	1.125	✓		Vern M-06	
1.063	+/-0.010	1.063	✓		"	
3.44	+/-0.030	3.438	✓		"	
2.450	+/-0.010	2.450	✓		"	
1.325	+/-0.010	1.323	✓		"	
0.300	+/-0.010	.300	✓		"	
1.200	+/-0.010	1.200	✓		"	
2.84	+/-0.030	2.835	✓		"	
0.19	+/-0.030	.188	✓		"	
5.86	+/-0.030	5.860	✓		"	
5.99	+/-0.030	5.987	✓		"	
Ø0.272	+0.006/-0.001	Ø.272	✓		"	
Ø0.266	+0.006/-0.001	Ø.266	✓		"	
1.75	+/-0.030	1.757	✓		"	
R0.25	+/-0.030	R.250	✓		R-G	
R0.06	+/-0.030	R.060	✓		"	
4.875	+/-0.010	4.875	✓		Vern M-06	
0.493	+/-0.010	.490	✓		"	
C-bore Ø0.765	+/-0.010	.764	✓		"	
0.250	+0.030/-0.010	.260	✓		"	
0.680	+/-0.010	.679	✓		"	
2.250	+/-0.010	2.250	✓		"	
4.500	+/-0.010	4.500	✓		"	
R1.275	+/-0.010	R.1.275	✓		"	
R0.031	+/-0.010	R.031	✓		R-G	



D4292-1 FITTING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 156350 M.C.J
1702-01

MS21209F1-10 HELICAL COIL, 1X
REF

GRAIN
DIRECTION

RELEASED
2011-02-01

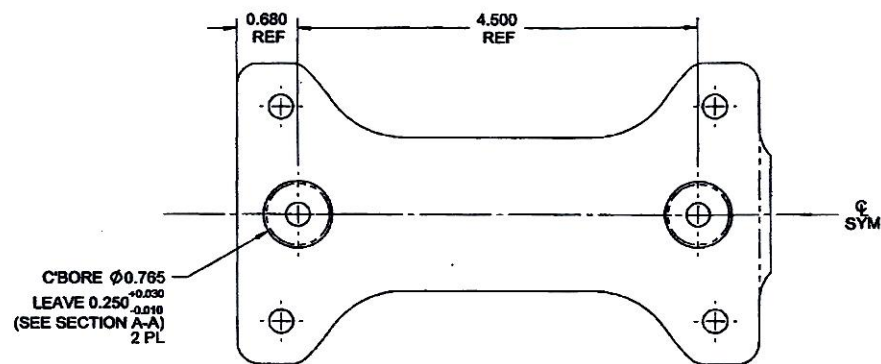
NOTES:

- 1) MATERIAL: 7075-T73/-T7351/-T73510/-T73511 BAR
PER AMS-QQ-A-200/11 OR AMS-QQ-A-225/9 (AMS 4124) OR AMS-QQ-A-250/12 (AMS 4078)
REF DART SPEC. M7075T73B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: P/N "D4292-1" AND B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.02 lbs

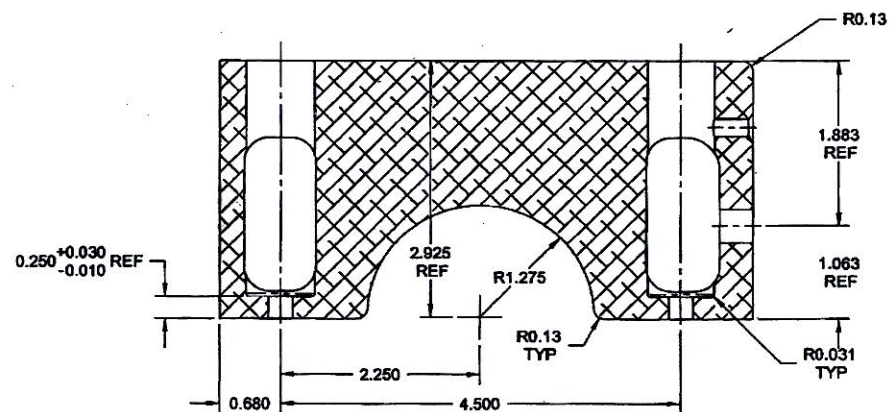
C	1.064 WAS 1.235 (C1-2), Ø0.286 WAS Ø0.323 (B3-2), ADD HELICAL COIL (D1-2)	CP	10.12.23
B	0.800 WAS 0.78 (C8-2), 0.825 WAS 0.81 (C4-2)	CP	10.11.30
A	NEW ISSUE	CP	10.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.23		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4292	REV. C
TITLE FITTING (206L/407 FWD)	SHEET 1 OF 3
	SCALE NTS
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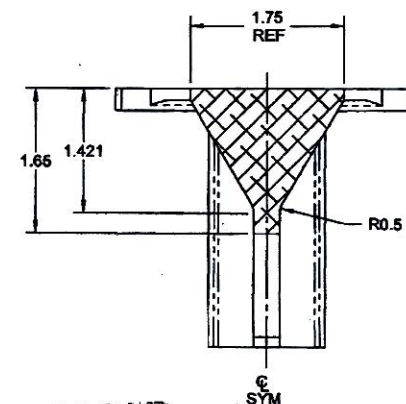
8 7 6 5 4 3 2 1



VIEW C-C D3-2



SECTION A-A A3-2



SECTION B-B C4-2

RELEASED
2011-02-01
JMM

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4292	REV. C
MFG. APPR.		TITLE	SHEET 3 OF 3
APPROVED		FITTING (206L/407 FWD)	SCALE
DE APPR.			NTS
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8 7 6 5 4 3 2 1